

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDAST3V070

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE

NAME: *Flaveria mcdougallii* Theroux, Pinkava & Keil

COMMON NAME: Grand Canyon Flaveria, Macdougall's yellowtops

SYNONYMS: *Flaveria macdougallii*, *F. mcdougallii*

FAMILY: Asteraceae

AUTHOR, PLACE OF PUBLICATION: Theroux, Pinkava & D.J. Keil, Madrono 24(1): 13-17, f. 1. 1977.

TYPE LOCALITY: USA: Arizona: Mohave County, Grand Canyon National Park, Cove Canyon, M.E. Theroux 1675. Alt. ca. 550 m.

TYPE SPECIMEN: HT: US-2770479. M.E. Theroux 1675, 27 Jan 1976. IT: ARIZ, ASC, ASU, DES, GCNP, GH, MNA, NY, RSA, SRSU, TEX, UC.

TAXONOMIC UNIQUENESS: One of 8 species in the genus *Flaveria*.

DESCRIPTION: Herbaceous perennial, robust clonal subshrub up to 1 m (3.2 ft) in diameter with woody rhizomes. Stems up to 1 m (3.2 ft) tall, with narrowly linear, succulent leaves, 2-8 mm to 5-14 cm (2-5.5 in) long. The flat-topped inflorescence has numerous tiny rayless yellow florets with 3-6 disk flowers about 4 mm high. Achenes are cylindrical with 10 veins. (Falk and Jenkins et al. 2001).

AIDS TO IDENTIFICATION: This species has no closely related species that are sympatric. They are distinguished from similar appearing species by its long, linear, flat succulent leaves. (Falk and Jenkins et al. 2001).

ILLUSTRATIONS: B&W line drawing (in Falk and Jenkins et al. 2001).

Color photos of plant and habitat (Falk and Jenkins et al. 2001).

B&W line drawing of plant and parts (Theroux, Pinkava, and Keil, 1977: f. 1)

Color photo of Holotype (*in* USNH at

<http://ravenel.si.edu/botany/types/fullRecords.cfm?myFamily=>)

Color photo of Isotype (*in* NYBG at

<http://207.156.243.8/emu/vh/specimen.php?irn=14541>)

TOTAL RANGE: Tributaries and main Colorado River corridor of western Grand Canyon, Arizona, in Coconino and Mohave counties. From Matkatimiba Canyon to Lava Falls Rapid.

RANGE WITHIN ARIZONA: See “Total Range.”

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Perennial clonal subshrub/forb.

PHENOLOGY: Flowers late September to October (November), with fruiting late fall.

BIOLOGY: Most reproduction is vegetative.

HABITAT: Located in hanging gardens or terrace ledges in perennial alkaline or saline seeps, in Muav Limestone and at Muav Limestone Bright Angel Shale interface (Falk and Jenkins et al. 2001). The occurrence within seeps varies with available moisture.

ELEVATION: 1,750 – 4,000 ft (533-1219 m).

EXPOSURE: Type on east to southeast exposure at seep, but also occurs on north and northeast exposures. Known sites range from partly sunny to nearly full sun.

SUBSTRATE: Muav Limestone and Muav Limestone Bright Angel Shale interface. Soil texture is sand and silt.

PLANT COMMUNITY: Mohave Desert in the Grand Canyon. Associated species include: *Adiantum capillus-veneris* (maidenhair fern), *Brickellia longifolia* (longleaf Brickellia), *Epipactis gigantea* (giant helleborine), *Maurandya antirrhiniflora* (blue snapdragon vine), *Mentzelia pumila* (stick-leaf), *Mimulus cardinalis* (monkey flower), *Muhlenbergia asperifolia* (scratchgrass), *Petrophytum caespitosum* (rock mat), *Rhamnus betulaefolia* (birchleaf buckthorn), and *Sporobolus airoides* (drop-seed). (Phillips, Phillips and Brian, 1982).

POPULATION HISTORY AND TRENDS: Known from few than 10 locations in a small geographical area within the state (Falk and Jenkins et al. 2001). In 1982, there were 5 separate populations known along the Colorado River and its side tributaries (Phillips, Phillips and Brian, 1982). NatureServe (2005) reports that this Taxon is “locally abundant within its limited habitat. A hydroelectric dam in this area has been proposed several times in the past; such a dam would flood most of the known populations if it were ever built.”

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: Salvage Restricted (ARS, ANPL 1999)
[Salvage Restricted (ARS, ANPL 1993)]
OTHER STATUS: None

MANAGEMENT FACTORS: Recreation in the canyon by day-use visitors may be a threat, and should be monitored. "May be threatened by flooding. A hydroelectric dam in this area has been proposed several times in the past; such a dam would flood most of the known populations if it were ever built." (NatureServe 2005).

PROTECTIVE MEASURES TAKEN:

SUGGESTED PROJECTS:

LAND MANAGEMENT/OWNERSHIP: BIA – Hualapai Reservation; NPS – Grand Canyon National Park and Lake Mead National Recreation Area.

SOURCES OF FURTHER INFORMATION

REFERENCES:

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MAJOR KNOWLEDGEABLE INDIVIDUALS:**ADDITIONAL INFORMATION:**

The species was named in honor of Dr. Walter B. McDougall, Curator of Botany at the Museum of Northern Arizona from 1955 to 1980.

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